

Appl. S.N. 10/696,335
Amdt. dated November 27, 2006
Reply to Final Office Action of September 28, 2006
Docket No. 200313765-1

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REMARKS

Entry of the foregoing amendments to the application is requested on the grounds that the claims, as amended, patentably distinguish over the cited art of record or, alternatively, place the application in better condition for appeal. The claims more particularly point out and distinctly claim the subject matter which Applicants regard as the invention. No new issues have been added which would require further consideration and/or search, nor has any new matter been added. The claims as amended are believed to avoid the rejections applied in the Final Office Action for reasons set forth more fully below.

The Final Office Action of September 28, 2006 has been received and carefully reviewed. It is submitted that, by this Amendment, all bases of rejection are traversed and overcome. Upon entry of this Amendment, claims 49-55 and 63-85 remain in the application. Reconsideration of the claims is respectfully requested.

Paragraph [0033] of the specification as filed is being amended herein to correct minor typographical errors.

Claims 69, 80-83 and 84-85 stand rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Regarding claim 69, the Examiner states that "layers of an objecting being fabricated are formed..." is not understood and is considered vague and indefinite.

Applicants have amended claim 69 by replacing the term "objecting" with "object." Support for this recitation may be found throughout the specification as filed, at least at paragraphs [0015] and [0019].

Regarding claims 80-83 and 84-85, the Examiner states that claims 80-83 recite "the system", and claims 84-85 recite "the method." The Examiner concludes that there is insufficient antecedent basis for these limitations.

Applicants have amended claims 80-83 and 84-85 to recite "the composition." Applicants submit that claims 80 and 84-85 each depend ultimately from claim 69, and that claims 82 and 83 previously depended from claim 69, which recites a composition.

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As such, Applicants submit that the rejection of claims 69, 80-83 and 84-85 under 35 U.S.C. 112, second paragraph has been traversed and overcome.

Claims 69 and 70 stand rejected under 35 U.S.C. 102(b) as being anticipated by Bredt (U.S. Patent Publication No. 2005/0197431). The Examiner states that Bredt discloses the use of a three-dimensional printing technique that applies multiple layers, that can be ceramic, to make the three-dimensional form. The Examiner states that a reaction retardant of sodium phosphate, as well as a calcium phosphate particulate is disclosed. In his remarks to the Applicants' arguments filed July 25, 2006, the Examiner states that, "a particulate blend (alkaline powder) is considered to include a calcium phosphate source."

Applicants have amended independent claim 69 (claim 49 has been similarly amended) to further clarify that the calcium phosphate source is a single source of calcium phosphate. This recitation is supported by the specification as filed, at least at paragraph [0027]. Applicants respectfully disagree with the Examiner's assertion that an alkaline powder is a calcium phosphate source, as the term is used by the Applicants. Applicants submit that **the alkaline powder is a calcium source**, but is not a **single source of calcium phosphate**. In the specification as filed (see paragraph [0027]), the Applicants state that "the calcium phosphate source provides an essential component of the calcium phosphate dissolution/precipitation reaction...." The examples of the calcium phosphate source provided by the Applicants include a **single source of calcium and phosphate** (e.g., tetracalcium phosphate, monocalcium phosphate, dicalcium phosphate dehydrate, etc. (see paragraph [0027])). These statements together clearly illustrate that Applicants' calcium phosphate source includes **calcium phosphate**. Applicants do not teach that the source can include one of the components and then be reacted with a solution containing the other of the components to form calcium phosphate.

In sharp contrast, Bredt teaches that a *calcium carbonate* powder is reacted with a sodium hydrogen phosphate solution. Calcium carbonate does not include any phosphate. In fact, the calcium phosphate of Bredt is formed only after the reaction of

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the calcium carbonate with a phosphate solution. As such, it is submitted that Bredt does not teach a single source of calcium phosphate as defined by the Applicants, and as recited in claims 69 and 70.

For all the reasons stated above, it is submitted that Applicants' invention as defined in claims 60 and 70 is not anticipated, taught or rendered obvious by the cited reference, either alone or in combination, and patentably defines over the art of record.

Claims 49-51, 53-55, 63, 64, 66-68, 71, 72, 74-81, 84 and 85 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bredt in view of Nichols (US Patent No. 5,952,093). The Examiner restates the conclusions regarding Bredt and further states that Nichols teaches the use of a layered double hydroxide.

Applicants reiterate the arguments made above regarding Bredt, and further submit that Nichols does not supply the deficiency of Bredt regarding the single source of calcium phosphate. As such, it is submitted that Applicants' invention as defined in the listed claims is not anticipated, taught, or rendered obvious by the cited references, either alone or in combination, and patentably defines over the art of record.

Specifically regarding the rejection of claims 50 and 71, Applicants submit that calcium phosphate and hydroxyapatite are not the same compound. Hydroxyapatite includes an -OH group that is not present in calcium phosphate. For this further reason, it is submitted that Applicants' invention as defined in claims 50 and 71 is not anticipated, taught, or rendered obvious by the cited references, either alone or in combination, and patentably defines over the art of record.

Claims 66, 72 and 73 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bredt in view of Nichols, and further in view of Goodson (US Patent Publication No. 2002/0009622). The Examiner restates the conclusions regarding Bredt and Nichols, and further states that Goodson teaches the use of accelerants.

Applicants again reiterate the arguments made above regarding Bredt, and further submit that neither Nichols nor Goodson supplies the deficiency of Bredt regarding the single source of calcium phosphate. As such, it is submitted that Applicants' invention as defined in claims 66, 72 and 73 is not anticipated, taught or

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rendered obvious by the cited references, either alone or in combination, and patentably defines over the art of record.

Applicants note and appreciate the Examiner's indication of the allowance of claim 52.

Claims 82 and 83 stand objected to as being dependant upon a rejected base claim. The Examiner indicates that the claims would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, second paragraph, and to include all of the limitations of the base claim and any intervening claims. Claims 82 and 83 have been so rewritten. As such, Applicants respectfully submit that claims 82 and 83 are now in a condition suitable for allowance.

In summary, claims 49-55 and 63-85 remain in the application. It is submitted that, through this amendment, Applicants' invention as set forth in these claims is now in a condition suitable for allowance. Should the Examiner believe otherwise, it is submitted that the claims as amended qualify for entry as placing the application in better form for appeal.

Further and favorable consideration is requested. If the Examiner believes it would expedite prosecution of the above-identified application, he is cordially invited to contact Applicants' Attorney at the below-listed telephone number.

Respectfully submitted,

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